

Data-Driven Plasma Science and Engineering Workshop (Oxford University, 28 February 2025)

ADIOS User Group Meeting (Oxford University, 27 February 2025)

Open Data Schema Workshop (UKAEA, 26 February 2025)

Preliminary agenda

Data-Driven Plasma Science and Engineering Workshop (Oxford University, 28 February 2025)

09.30-10.00: Welcome and Introduction (Paul Watry (Oxford), Scott Klasky (ORNL), Felix Parra Diaz (PPPL))

10.00-10.30: Challenges from the front-line: STEP fusion reactor design (Howard Wilson, UKIFS)

10.30-11.20: Advanced Cyber-Physical Systems - MBSE, Simulation, Machine-Learning (Ted Bapty, Vanderbilt University, MetaMorph)

11.20-11.40: Break

11.40-12.30: Data-Driven Engineering: Industrial Perspective (Jose Garcia-Urruchi, JLR; Harry Jenkin, ANSYS; John Stone, NVIDIA)

12.30-13.15: Lunch

13.15-14.00: Scientific Computing: ADIOS and EFFIS (Norbert Podhorszki, ORNL)

14.00-14.40: Managing Complexity: A data driven framework for fusion design and control (Fazal Chaudry, UKAEA)

14.40-15.00: Break

15.00-16.00: Panel Discussion - Use case challenges from US/UK perspective, Use case challenges from industrial perspective (JLR and GE)

16.00-16.30: Outcomes

ADIOS User Group Meeting

9:00 Welcome (Scott Klasky, ORNL)

9:30 Talk on fusion app (CS Chang, PPPL)

9:50 Talk on accelerator physics (Axel Huebl)

10:10 Talk on aerospace applications at GE (Stephan Priebe)

10:30 TBD

10:30 - 10:40 Break

10:40 TBD

11:00 UK work with ADIOS (Shaun de Witt)

11:20 Talk on fusion applications (Felix Parra Diaz)

12 am - 1 pm Lunch

1:00 ADIOS Campaigns (Norbert Podhorszki)

2:00 GPU and derived variables (Ana Gainaru)

2:30 TBD

2:50 Compression with ADIOS (Qian Gong)

3:20 - 3:30 Break

3:30 TBD

3:50 Visualization Services (Dave Pugmire)

4:20 TBD

4:40-5:30 Discussions

Open Data Schema Workshop (Culham or Oxford, 26 February 2025)

09.30 - 10.00 - Welcome and overview (Shaun de Witt/Paul Watry/Scott Klasky)
10.00 - 10.30 - General Schema and layers (Scott Klasky/Ana Gainaru/Sanjay Ranka - ORNL/UFL)
10.30 - 11.00 - I/O for streams and files (Norbert Podhorszki - ORNL)
11.00 - 11.30 - Coffee and socializing
11.30 - 12.00 - High level abstractions of schemas (Axel Huebl - LBNL)
12.00 - 12.30 - Physics informed data reduction (Sanjay Ranka - UFL)
12.30 - 13.30 - Lunch
13.30 - 14.00 - Physics informed data interpolation (Jacob Merson - RPI)
14.00 - 14.20 - Schema thoughts for GE (Stephane Priebe – GE Aerospace)
14.20 - 14.40 - Schema thoughts for fusion (Felix Parra Diaz - PPPL)
14.40 - 15.00 - Schema thoughts for CFD (TBD)
14.00 - 14.30 - Interactions with HPC and AI frameworks and viz (Ana Gainaru – ORNL)
14.30 - 15.00 - Panel on schema requirements
15.00 - 15.30 - Coffee and socializing
15.30 - 17.00 - General Discussion and conclusion